

CLAIMS

1 1. An arm motion assembly for an exercise device, said assembly
2 comprising:

3 a first link which is pivotally supported by a first frame portion of said
4 exercise device at a first pivot point so that said first link is capable of
5 reciprocal motion about said first pivot point;

6 a second link which is pivotally supported by a second frame portion of
7 said exercise device at a second pivot point spaced from said first pivot point
8 so that said second link is capable of reciprocal motion about said second pivot
9 point; and

10 a connector link which extends between said first link and said second
11 link, said connector link having a handgrip, said connector link being pivotally
12 joined to said first link at a first junction point, and to said second link at a
13 second junction point so that when said first and second links pivot about their
14 respective pivot points, said handgrip travels in a reciprocal path of travel.

1 2. The assembly of claim 1, wherein said connector link includes a
2 rocker arm portion which projects therefrom in an angled relationship and
3 wherein said second link is pivotally joined to said connector link through said
4 rocker arm portion.

1 3. The assembly of claim 1, wherein the location of the first
2 junction point is adjustable relative to the first link or the connector link.

1 4. The assembly of claim 1, wherein the location of the second
2 junction point is adjustable relative to the second link or the connector link.

1 5. The assembly of claim 1, wherein the location of the first pivot
2 point is adjustable relative to the first link or the first frame portion.

1 6. The assembly of claim 1, wherein the location of the second
2 pivot point is adjustable relative to the second link or the second frame portion.

1 7. The assembly of claim 1, wherein the length of at least one of
2 the first link, the second link and the control link is adjustable.

1 8. The assembly of claim 1, wherein the handgrip portion is
2 capable of pivoting relative to the remainder of the control link.

1 9. The assembly of claim 1, wherein the first link is a swing arm
2 which is configured to be attachable to a foot link so as to direct a first end of
3 that foot link in a reciprocal path of travel.

1 10. The assembly of claim 1, further including a synchronization
2 link which is pivotally connected to said first link.

1 11. An arm motion assembly for an exercise device, said assembly
2 comprising:

3 a first link which is pivotally supported by a first frame portion of said
4 exercise device at a first pivot point so that said first link is capable of
5 reciprocal motion about said first pivot point when said exercise device is in
6 use;

7 a second link which is pivotally supported by a second frame portion of
8 said exercise device at a second pivot point spaced from said first pivot point,
9 said second link including a handgrip; and

10 a connector link which extends between said first link and said second
11 link, said connector link being pivotally joined to said first link at a first
12 junction point, and to said second link at a second junction point; so that when
13 said first link reciprocates about said first pivot point, said connector link
14 causes said second link to pivot about said second pivot axis; whereby, said
15 handgrip moves in a reciprocal path of travel.

1 12. The assembly of claim 11, wherein said first link includes a
2 rocker arm portion which projects therefrom in an angled relationship, and
3 wherein said connector link is pivotally joined to said first link through said
4 rocker arm portion.

1 13. The assembly of claim 12, wherein said first pivot point is
2 disposed at the vertex of an angle formed by the rocker arm portion and the
3 remainder of the first link.

1 14. The assembly of claim 11, wherein the location of said first
2 junction point is adjustable relative to the first link or the connector link.

1 15. The assembly of claim 11, wherein the location of said second
2 junction point is adjustable relative to the second link or the connector link.

1 16. The assembly of claim 11, wherein the location of the first pivot
2 point is adjustable relative to the first link or the first frame portion.

1 17. The assembly of claim 11, wherein the location of the second
2 pivot point is adjustable relative to the second link or the second frame portion.

1 18. The assembly of claim 11, wherein the length of the second link
2 is adjustable.

1 19. The assembly of claim 11, wherein the handgrip is capable of
2 pivoting relative to the remainder of the second link.

1 20. The assembly of claim 11, wherein the first link is a swing arm
2 which is configured to be attachable to a foot link so as to direct a first end of
3 that foot link in a reciprocal path of travel.

1 21. An arm motion assembly for an exercise device, said assembly
2 comprising:

3 a first link pivotally affixed to a first frame portion of the exercise
4 device at a first pivot point to that said first link is capable of reciprocal motion
5 about said first pivot point;

6 a second link pivotally affixed to a second frame portion of the exercise
7 device at a second pivot point separated from said first pivot point, so that said
8 second link is capable of reciprocal motion about said second pivot point;

9 a connector link which extends between said first link and said second
10 link, said connector link being pivotally joined to said first link at a first
11 junction point, and to said second link at a second junction point so that when
12 one of said first links and said second links reciprocates about its respective
13 pivot point, said connector link causes the other of said first and second links to
14 pivot about its respective pivot point; and

15 a handgrip which is affixed to one of: said first link, said second link,
16 and said connector link.

1 22. An exercise device having an improved arm action, said
2 exercise device comprising:

3 a frame having a first pivot axis defined thereupon;

4 a foot link having a foot receiving portion which is configured to

5 support a user's foot;

6 a coupler for coupling a first end of the foot link to the first pivot axis

7 so that said first end of said foot link is directed to travel in an arcuate path;

8 a guide operable to direct a second end of the foot link in a reciprocal

9 path of travel as said first end travels in said arcuate path;

10 a first link which comprises a swing arm pivotally supported by the

11 frame at a first pivot point defined on said frame;

12 a second link which comprises a control link pivotally supported by

13 said frame at a second pivot point defined on said frame and spaced from said

14 first pivot point; and

15 a connector link which extends between said swing arm and said

16 control link, said connector link including a handgrip portion, said connector

17 link being pivotally joined to said swing arm at a first junction point, and to

18 said control link at a second junction point; so that when said swing arm

19 reciprocates about said first pivot axis, and said control link pivots about said

20 second pivot axis, said handgrip moves in a reciprocal path of travel.

1 23. The exercise device of claim 22, wherein said guide comprises a

2 ramp.

1 24. The exercise device of claim 22, wherein said guide comprises a
2 portion of said swing arm.

1 25. The exercise device of claim 22, wherein said swing arm is in
2 mechanical communication with said foot link so that said swing arm
3 reciprocates about said first pivot point when said second end of said foot link
4 travels along said reciprocal path.